

### REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-2 and 4-17 remain pending in the application. Claims 1-2, 4, 6, 10-11 and 13 have been amended and new claims 18-20 have been added to secure an appropriate scope of protection to which Applicants are believed entitled.

Claims 10-11 and 13-16 are rejected under 35 USC 102(b) as being anticipated by Petersson et al. (U.S. Patent No. 5,140,284). A rejection based on 35 U.S.C. §102 requires every element of the claim to be included in the reference, either directly or inherently.

In Petersson et al., the number N of the loop divider is chosen and then fixed for a frequency value. When Petersson et al. varies the frequency value, the value of N varies also. Table 1, as mentioned by the Examiner, contains the different values for N when the frequency value is changed. These values are fixed for a given frequency.

In the present application, the Na value (loop divider) varies for a given frequency value. The length of the cycle of evolution of Na is variable and dependent on the value Nb of the variable-ratio divider.

Moreover, in Petersson et al., Fref is dependent on the value of P (corresponding to the number Nb of the present application), not the value of N.

Petersson et al. describes a method of controlling a frequency synthesizer where it is necessary to use three values N, P and R and three steps of dividing: 1) dividing the output signal of the voltage controlled oscillator by a first value P; 2) dividing the output signal of the voltage controlled oscillator by a second N; 3) dividing the input signal from the frequency source by a third value R, and controlling the first, second and third values such that the frequency synthesizer synthesizes a range of predetermined frequencies. The first value P and the third value R are maintained such that  $P \cdot R$  equals a constant value.

In the present invention, two dividers and the evolution of Na are used to synthesize a frequency such as claimed in new claims 18-20.

Petersson et al. fails to provide the variation of Na relative to the value of Nb and the fact

that the value of Na varies for a given frequency value.

Claims 1-2, 4-9, 12 and 17 are rejected under 35 USC 103(a) as being unpatentable over Petersson et al. and Figure 2 of Applicants' admitted prior art (APA) and further in view of Dekker (U.S. Patent No. 6,239,660).

Claim 1 is patentable over Petersson et al. in view of APA and Dekker for at least reasons similar to those advanced above with respect to claim 10 and the rejection of claim 1 should be withdrawn. The combination of APA and Dekker with Petersson et al. fails to cure the noted deficiencies of Petersson et al.

Claims 2, 4-9, and 17 depend, either directly or indirectly, from claim 1, include further important limitations, and are patentable over the applied combination of references for at least the reasons advanced above with respect to claim 1. The rejection of claims 2, 4-9, and 17 should be withdrawn.

Claim 12 depends, either directly or indirectly, from claim 10, includes further important limitations, and is patentable over the applied combination of references for at least the reasons advanced above with respect to claim 10. The rejection of claim 12 should be withdrawn.

Further, Dekker discloses a synthesizer circuit comprising a filter placed after the synthesizer for removing unwanted high frequency noise. Nevertheless, Dekker fails to disclose or suggest the use of varying of Na such as claimed in new claims 18-20.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including

extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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